No. 640,449. Patented Jan. 2, 1900.

W. T. CRESSLER.

STAMP WITH CHANGEABLE FACE.

(Application filed Oct. 28, 1898.)

(No Model.)

Fig. 1.

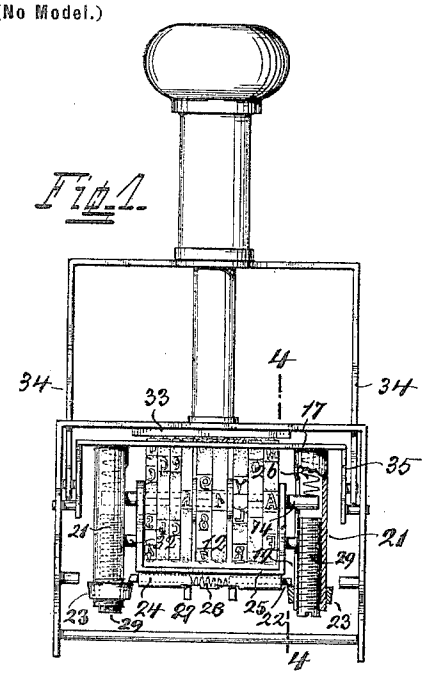


Fig. 2.

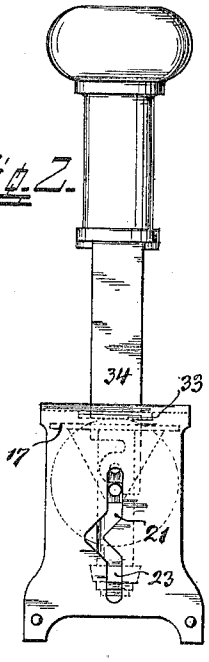


Fig. 3.

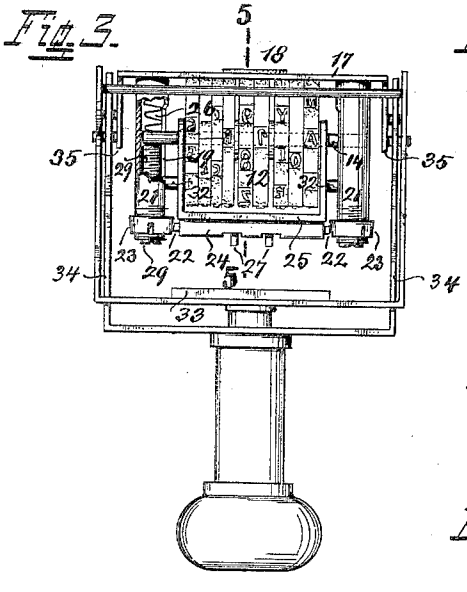


Fig. 4.

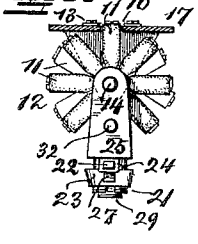


Fig. 5.

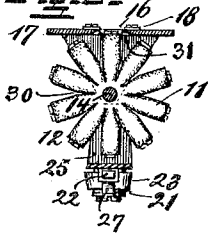


Fig. 6.

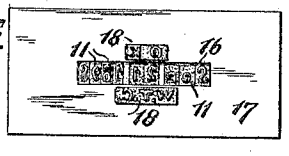
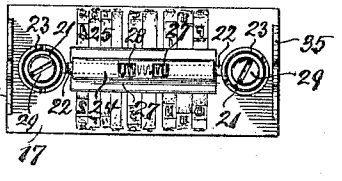


Fig. 7.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILL T. CRESSLER, OF NORWOOD, OHIO.

STAMP WITH CHANGEABLE FACE.

SPECIFICATION forming part of Letters Patent No. 640,449, dated January 2, 1900.

Application filed October 23, 1899. Serial No. 694,767. (No model.)

To all whom it may concern:

Be it known that I, WILL T. CRESSLER, a citizen of the United States, and a resident of Norwood, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Self-Inking Stamps with Changeable Faces; and I do hereby declare the following to be a clear, full, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to improvements in stamps with changeable faces—such as, for instance, are used for dating purposes, where part of the printing-face has to be changed at certain periods or every day and where such stamp is mounted in a manner to be reversible for the purpose of being inked automatically.

It relates, further, to such stamps where the type are formed of rubber and where the characters used to make up a date form each a part of a separate wheel, around the periphery of which a number of such type are arranged.

The features of my invention comprise an arrangement and disposition of the characters throughout the different type-wheels which limit the number of type carried by any particular wheel in a manner to prevent overcrowding, whereby the size of such wheels may be reduced to permit them to be placed within the limited confines of the reversibly-mounted stamp-carrying frame of a self-inking stamp.

It further comprises means which permit adjustment of any of the type-wheels individually for the purpose of assembling the various characters required in making up any particular date, the particular arrangement and construction permitting such to be done without disturbing the alinement of any one of the wheels.

It also comprises a formation of the individual type-wheels in a peculiar manner and shape, whereby they may be freely manipulated and held in position without causing any of their parts to become distorted or bent out of shape.

In the following specification and particularly pointed out in the claims is found a full description of my invention, its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in elevation my improved stamp in combination with and supported by a so-called "self-inking-stamp" frame with its printing-face in position against the ink-pad to be automatically inked. Fig. 2 shows a side elevation of Fig. 1. Fig. 3 is a view similar to Fig. 1, but with the stamp turned over to bring its printing-face uppermost, which is the most convenient position while changing the matter of the stamp. This is also the position which the latter occupies with reference to the frame during printing. Fig. 4 is a cross-section on line 4 4 of Fig. 1 and shows the normal or printing position of the type on the face of the stamp. Fig. 5 is a cross-section on line 5 5 of Fig. 3 and shows temporary position of the type of the stamp which is necessary while the matter of the printing-face thereof is being changed. Fig. 6 is a view of the printing-face of the stamp. Fig. 7 is a reverse view of the parts shown in the preceding figure.

The changeable type of this stamp are carried one each at the outer flat ends of a series of radially-projecting arms 11, all of equal length and disposed around a common center, forming type-wheels 12, the whole—that is, type and arms—being integral and of a material having yielding or elastic properties, like rubber. These type-wheels have each a central bore to receive a rod 14, upon which they are mounted, being supported side by side to the required number. These ends of arms 11, forming type-faces, are all of equal length or height, meaning thereby that dimension which corresponds with the height of a letter, so that the end of any arm of a type-wheel and of a set of wheels may be received within a slot 16, cut to proper width into a plate 17, whereby when in such position the type-faces, with the letters thereon, are held in alinement. Plate 17 forms the

printing-face of the stamp, and to it, adjoining the slot therein and parallel with this latter, other type may be affixed, as shown at 18, forming such matter which does not have to be changed and remains permanent.

The type-wheels as mounted on rod 14 are each capable of independent rotation to permit the type-bearing end of any particular arm to be brought within slot 16. The number of the type-wheels depends on the purpose and requirements of the stamp. In a date-stamp nine are usually sufficient—three for the months as abbreviated, two for the day, and four for the year. Thus the date September 21, 1898, would appear as follows: "Sep 21 1898." The letter "S" would be on the first type-wheel, together with a number of other capital letters sufficient to embrace all the first letters required to start any month, repetitions being, of course, avoided. The letter "e" would be on the second type-wheel, together with a sufficient number of other letters to make all the second letters required. The letter "p" would be on the third type-wheel, combined with other letters on the same plane, duplications being, of course, in each case avoided. The wheels bearing the numbers are arranged on the same system. The number of characters carried by the fourth wheel—the one bearing the number "2" in this instance—need only be three, since there are only thirty-one days in a month, and "3" being the highest numeral required. The characters carried by the sixth, seventh, and eighth wheels may also be limited, since the one requiring the most frequent changes of these—that is, the eighth one—need only be changed once in a decade, and the other ones at much longer periods. This permits the addition of extra arms, carrying suitable characters, to form other matter—as, for instance, "Paid," "Rec.," &c. As thus arranged, the highest number of arms on any type-wheel does not exceed ten, and thereby their size is suitably reduced to permit placing within the limited confines of the reversible frame of the self-inking stamp.

In order to permit substitution of one type for another when change of date is required, it becomes necessary to sufficiently disengage the type-bearing ends of arms 11 from within slot 16 to permit rotation of the particular type wheel or wheels, after which the type-faces must be readjusted to project again to proper printing height beyond plate 17 and to a level with the permanent matter thereon. For such purpose the distance between this plate and the type-wheel support (rod 14) is made adjustable, which is done by supporting one of them in a manner to render it movable to or from the other one. In this case rod 14 is supported movably, for which purpose its ends occupy slots 19 in posts 21, projecting from the inside of plate 17 and forming, with the latter, a rigid supporting-frame, the parts mentioned—that is, plate and posts—mutually sustaining each other. The type on the ends of the arms within slot 16 are held in their normal position for printing, in which they must project to proper printing height beyond plate 17, by locking-dogs 22, resting on stops 23, which project from posts 21. These stops 23 are adjustable on posts 21, so that the position of the type may be properly regulated and be brought exactly in line with any other type, in case there should be such, on plate 17. This adjustment of stops 23 is a screw adjustment and is obtained by a screw connection, whereby stops 23, in form of internally-threaded rings, are secured to the exteriorly-threaded posts 21. Locking-dogs 22 occupy bearings 24 and are supported by a frame 25, connected to and moving with the type-wheel support, so that the position of the type-wheels becomes thus directly dependent on the position of stops 23. The type-wheels are prevented from moving outwardly by springs 26, seated within the hollow posts 21 and against which the ends of rod 14 rest. When the type are in normal position—that is, ready for printing, as shown in Figs. 1 and 4—then these springs are compressed. When changing of the matter within slot 16 becomes necessary, then rod 14, carrying with it all type-wheels, is dropped, which is done by disengaging dogs 22 from stops 23, after which the expansion of contracted springs 26 readily causes the desired movement. To permit such disengagement, dogs 22 have a sliding movement within their bearings 24 and are provided with projections 27, permitting their manipulation for the purpose of retracting them to clear the stops. Normally these dogs are held outwardly by a spring 28 behind them. In thus dropping rod 14, with the type-wheels thereon, it is desirable, however, not to drop it too much, and especially not so far as to bring the arms then occupying slot 16 entirely out of the same. The object of this limited drop is to hold in alinement those ends which are not to be changed and which ends in most cases comprise the majority, since generally one type only is required to be changed. This limit is obtained by stops 29 in form of screws seated in the outer ends of hollow posts 21 and against which the ends of rod 14 come to a halt when thrown outwardly by the expanding springs 26. The change of the particular type or types is best accomplished by pushing the point of a pencil or similar slender implement against one of the arms accessible below plate 17 of the corresponding wheel or wheels. During this manipulation parts are in a position as shown in Figs. 3 and 5, with the stamp held in the upturned position, as shown in Fig. 3. It is seen now that any single intermediate type-wheel can be readily turned without affecting the alinement of any one of those mounted to either side of it, since these latter are held yet by the end of one of their arms which still remains within slot 16, (see Fig. 5,) while

by reason of the elasticity of the material the arm of the particular wheel to be turned yields readily when such wheel is positively pushed. To permit the arms to yield more readily, the width of them decreases toward the center, producing spaces, as shown at 30, so that they are not in each other's way.

Since in a date-stamp the fifth wheel—the one carrying the numeral "1" in the example previously stated—has to be changed most often—that is, daily—the wear caused by this frequent manipulation of its arms while being pushed in and out of slot 16 is liable to cause it to wear out much in advance of the other wheels. To prevent such, slot 16 is undercut at that particular place, as shown at 31, so that this particular wheel may be turned freely and easily and without bending its arms in order to disengage their ends from slot 16. After the matter within slot 16 has been satisfactorily changed the whole line is restored to printing height by simply pushing the whole set of type-wheels outwardly—that is, toward plate 17—until dogs 22 have passed again beyond stops 23, the previously-adjusted position of which latter at once determines the proper position of the parts, and against which stops they are held by the reaction of the compressed springs 26. Stops 23 and the outer ends of dogs 22 are beveled, as shown, to permit them to freely pass each other during this movement.

32 are guide-pins provided on frame 25 and extending into slots 19 of posts 21 to prevent lateral displacement of frame 25, which would cause disengagement of dogs 22 from stops 23. The connection of my improved stamp to the movable part 34 of this stamp-frame may be accomplished in any suitable manner and may be between posts 21, and said part or plate 17 may have flanges 35, which mediate the connection.

There is no operative connection between rod 14 in its function as a center of rotation for the type-wheels and posts 21, into the slot of which its ends extend. These ends are simply extended and utilized as connecting means, which means might also be formed by independent projections on frame 25.

Having described my invention, I claim as new—

1. In a stamp with a changeable type-face, the combination of a plate constituting the printing-face of the stamp and provided with a slot, a series of type-wheels mounted to be capable of rotation and provided with arms having type at their ends, the set of type-wheels being supported as a whole and in a manner to have a sliding movement to or from the plate mentioned, the location of the parts being such as to enable the end of any arm to enter and occupy the slot in the plate and stops to limit the movement of the set of type-wheels, in one direction to cause the type to project at proper printing height beyond the printing-face of the stamp and in the other direction to prevent the ends of the type-supporting arms from entirely leaving the slot which they occupy, but permitting their manipulation for the purpose of changing the matter of the printing-face.

2. In a stamp with a changeable type-face, the combination of a plate constituting the printing-face of the stamp and provided with a slot a series of type-wheels having arms with type at their ends mounted to be capable of rotation and supported as a whole in a manner to have a sliding movement to or from the plate mentioned, the location of the parts being such as to enable the end of any arm to enter and occupy the slot in said plate, locking-dogs carried by the means which support the type-wheels, adjustable stops so located that when engaged by these dogs they hold the type to project at proper printing height beyond the printing-face of the stamp, springs which when compressed act in a manner to hold the locking-dogs against the stops holding thereby also the type-wheels in their proper position and preventing the type thereon from moving beyond printing height and additional stops limiting the action of the springs mentioned, which springs when the locking-dogs are disengaged from the stops first mentioned have a tendency to move the set of type-wheels away from the printing-face of the stamp and the ends of their arms out of the slot in the latter.

3. A type-wheel consisting of a number of radially-disposed arms, the ends of which form type-faces and have type thereon and the width of which arms is decreased toward the center, forming spaces to each side of this narrower part as shown and for the purpose described.

4. In a date-stamp with a changeable printing-face, the combination of a plate constituting the printing-face of the stamp and provided with a slot, type-wheels having arms with type at their ends, there being a sufficient number of them to provide the characters needed to make up a date, said wheels mounted to be capable of rotation and supported as a whole in a manner to have a sliding movement to or from the plate mentioned, the location of the parts being such as to enable the end of any arm to enter and occupy the slot in said plate whereby they are held in alinement, a cut-out on the under side of the face-plate and to both sides of the slot therein, such cut-out being opposite the type-wheel carrying the type for making up the units of days in the date and permits said wheel to be freely rotated without disturbing the alinement of the adjoining wheels, the arms of which are held within said slot.

In testimony whereof I hereunto set my signature in presence of two witnesses.

WILL T. CRESSLER.

Witnesses:
C. SPENGEL,
D. B. KLIMPER.